

Comm.

Dr. Gardner  
Dr. Jacobson  
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THE COUNCIL FOR TOBACCO RESEARCH-U.S.A., INC.

110 EAST 59TH STREET  
NEW YORK, N.Y. 10022  
(212) 421-8985

1973

Application For Renewal of Research Grant

(Use extra pages as needed)

First Renewal  Second Renewal

Date: January 31, 1973

1. Principal Investigator (give title and degrees): Benjamin Bell, M.D., and Charles L. Rose, Ph.D.

2. Institution & address: VA Outpatient Clinic, 17 Court Street, Boston, Mass 02108

3. Department(s) where research will be done or collaboration provided: Normative Aging Study (VA Special Purpose Research Laboratory)

4. Short title of study: A Smoking Research Program in the Normative Aging Study

5. Proposed renewal date: July 1, 1973 to June 30, 1974

6. How results to date have changed earlier specific research aims: The aims as set up in the original proposal have not changed; namely, to mobilize, coordinate and upgrade smoking research in the Normative Aging Study. The program exploits the availability of the Normative Aging population and the potential of its interdisciplinary and prospective design for smoking research. Since the ramifications of smoking effects are extensive, this program extends into virtually all aspects of the Study. For the period encompassed by this renewal request upward of 2,000 measures on 2,000 subjects for two examination times will be available.

7. How results to date have changed earlier working hypothesis: The results to date have been encouraging with respect to the above goals. The funds provided by CTR, though a small percentage of the total costs of the Normative Aging Study, have enabled a much larger scope of research than could otherwise have been possible.

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## 8. Any additional facilities now required? Describe briefly:

None

## 9. Any changes in personnel? Append biographical sketches of new key professional personnel. There have been no changes in personnel. During the period July 1, 1972 to January 31, 1973 the following professional personnel have been active:

Benjamin Bell, M.D. Principal Investigator

Raymond Bosse, Ph.D. Program Coordinator

Spencer Burney, M.D. Clinical Medicine and Biochemistry

Paul Costa, Ph.D. Personality Research

Albert Damon, M.D., Ph.D. Clinical Medicine and Anthropology

James Fozard, Ph.D. Research Psychologist

Arthur Garvey, Ph.D. Statistician and Data Manager

Ronald Nuttall, Ph.D. Methodology

Charles L. Rose, Ph.D. Research Sociologist, Co-principal Investigator

Carl Seltzer, Ph.D. Anthropology

## 10. Append outline of experimental protocol for ensuing year.

## 11. List publications or papers in press resulting from this or closely related work. (append reprints or manuscripts not previously sent). The following manuscripts are appended:

1. Longitudinal Analysis of Smoking and Weight Change (Garvey)
2. Age and Interpersonal Factors in Smoking Cessation (Bosse)
3. Death Rates and Smoking in the Elderly (Seltzer)

In addition, the following papers were published (copies have already been sent to CTR)

1. Significance of Functional Age for Research in Aging (Bell)
2. Strategy of Functional Age Research (Nuttall)
3. Measurement of Social Age (Rose)
4. Predicting Age from Body Measurements (Damon)
5. Auditory Functional Age (Bell)
6. Laboratory Functional Age (Burney)
7. Predicting Age from Abilities and Personality (Fozard)
8. Functional Age and Age-related Measures (Dempster)

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## 13. Budget for the coming year:

## A. Salaries (give names or state "to be recruited")

Professional (give % time of investigator(s)  
even if no salary requested)

## Salaries

## Professional

		% time	Amount
Bosse		85%	12,000
Nuttall		12%	3,500
Costa		8%	2,500
Consultant Fees			4,500

## Technical

(5) Clerk typist	100%	6,800
(6) Computer Programmer	100%	9,800
(7) Research Assistant	50%	5,000

4400

3360

Fringe Benefits 10% of (1), (5), (6), & (7) 33.60 - 10% 3.360

Sub-Total for A 47,500

47460

## B. Consumable supplies (by major categories)

Office supplies and duplicating  
Reprints and publication costs  
Lab supplies

500
1,000
2,500

Sub-Total for B 4,000

## C. Other expenses (itemize)

Data processing costs (computer time, key punching,  
tape and disc rental, programming consultation)

10,000

travel for consultation and scientific meetings

1,500

Sub-Total for C 11,500

Running Total of A + B + C 63,000

## D. Permanent equipment (itemize)

Storage cabinet for magnetic tapes  
two (2) IBM card file cabinets @ \$285

430
570

Sub-Total for D 1,000

none

## E. Indirect costs (15% of A+B+C)

Total Request \$641000

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Total Request \$641000

14. Other sources of financial support:

List financial support from all sources, including own institution, for this and related research projects.

CURRENTLY ACTIVE

Title of Project	Source (give grant numbers)	Amount	Inclusive Dates
Normative Aging Study	Research Service, VA Central Office, Washington, D.C.	\$196,000 200,000	July 1, 1973 to June 30, 1974
Support from funds of VA Outpatient Clinic, Boston including (1) physical facilities such as office space and equipment, telephone, maintenance, security, janitorial services utilities and clinic facilities, including laboratory x-ray and audiology and (2) personal services such as partial professional salaries of Study Director, Director of Clinical Medicine and Laboratory Research, Audiologist, radiologist, x-ray technicians, and clinical consultants.			

PENDING OR PLANNED

Title of Project	Source (give grant numbers)	Amount	Inclusive Dates
	none		

It is understood that the investigator and institutional officers in applying for a grant have read and accept the Council's "Statement of Policy Containing Conditions and Terms Under Which Project Grants Are Made."

Checks payable to

Normative Aging Study

Mailing address for check:

VA Outpatient Clinic

17 Court Street, Boston, Mass 02108

Principal investigator

Typed Name Benjamin Bell, M.D.

Signature B. Bell

Date 1/29/73

Telephone 617-223-2052

Area Code

Number

Extension

Responsible officer of institution

Typed Name Charles L. Rose, Ph.D.

Title Assistant Director, Normative Aging Study

Signature Charles L. Rose

Date Jan 29, 1973

Telephone 617-223-2053

Area Code

Number

Extension

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## Item 12. Summary Progress Report

(1) Spurred by the Special Smoking Research Program, we have set up a weekly scientific meeting. These meetings were materially aided by the presence of a CTR monitor. A smoking questionnaire has been completed and approved for use by the Bureau of Management & Budget in Washington. The questionnaire, which is appended, is currently being sent to the 2,000 Normative Aging subjects. A drinking questionnaire has been completed but not yet approved by the Bureau of Management & Budget. A lifestyle questionnaire, including sociological and personality items is in preparation.

(2) Two procedures have been instituted for measurement of CO, CO<sub>2</sub>, and O<sub>2</sub>, through analysis of expired air, and analysis of blood gases through the use of ear-lobe blood. The expired air analysis is being done in the laboratories of the Harvard School of Public Health. The feasibility study of these procedures are now in their final stages. If feasible, and at this writing it would appear to be so, the data will be related to smoking history, and for smokers will be taken experimentally before and after smoking. Also on a volunteer basis, nonsmokers will participate in the experiment. This will provide for the first time the distribution of the measures of these gases in a large series of normals, providing norms for healthy individuals that do not yet exist. Also the effect of smoking on the level of these gases will be determined.

(3) A pilot project has been started with the Cardiology Service (Dr. Haber) of the Massachusetts General Hospital to differentiate hypertensives through blood and urine measurement, renin, aldosterone, cortisol, and mineral corticoids. If this study is successful, we can determine if there is a relationship between smoking and these measures which are indices of stress and part of the hypertensive state as hypothesized by the MGH group.

(4) Blackburn coding has been completed on 2, 000 EKG's through a contract with the School of Public Health of the University of Minnesota. The Blackburn code is a descriptive method for assessing the EKG and gives us an objective tool for assessing cardiac status and its relationship to smoking habits, as well as other health measures.

(5) A symposium on Smoking and Age was organized for the 25th Annual Scientific meeting of the Gerontological Society of December 19, 1972 at San Juan. Three of the papers came from the Normative Aging Study (Drs. Seltzer, Bosse', and Garvey). A copy of the program is appended. The motif of the symposium was that smoking be investigated not merely for its relationship to mortality and morbidity but also for its relationship to normal aging processes. The latter, of course, is the emphasis in the Normative Aging Study and represents a unique or little used approach in smoking research.

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Item 10. Outline and Proposed Research, July 1, 1973 to June 31, 1974

(1) We will develop questionnaires on drug and pill taking, life styles and environment, and personality. Data analysis will be completed on these instruments in addition to the smoking and drinking questionnaires which have already been completed. Data on drinking, drug and pill taking will be collected in addition to smoking since they all have in common a relationship to psychological or physiological dependence. Also, they contribute or may contribute to change in health status and it would be important to investigate the relative importance of each in this regard.

(2) Relationship between smoking and clinical status in tooth decay and periodontal tissue will be studied. The dental data are now being merged with Normative Aging data in one data file. Data management and analysis will be carried out primarily by the statistical and computer programming personnel of the Normative Aging Study.

(3) A longitudinal analysis over two examination times 5 years apart will be carried out on changes in smoking habits in relation to changes in blood pressure, cholesterol, triglycerides and pulmonary function. This will allow us to examine the effect of smoking habits on change over time in these physiological variables.

(4) Personality type A and B assessments will be carried out with Jenkins' objective instrument (see appended: Jenkins Activity Survey of Health Prediction). Since these personality types are said to be related to coronary artery disease, we will also examine their relationship to smoking. This will determine whether the work of Roseman and Friedman (The Western Collaborative Study) at the Mt. Zion Hospital in San Francisco relating coronary artery disease to personality, utilizing a clinical interview for assessing personality, is replicable with the objective questionnaire of the Jenkins type.

(5) We will study the association between amount of coffee and tea drinking and selected physiological and behavioral variables. Insofar as our data will allow, we will study the relationship of coffee and tea drinking with mortality and morbidity. This will permit us to determine whether the results obtained by the Drug Surveillance Program of the Boston University Medical Center using sick patients (Lancet, 12-16-72) apply to our normal series.

(6) Subjects who have died will be compared to surviving age peers with respect to smoking, cholesterol, social class, parents' age at death and personality traits, in order to determine those variables which best discriminate between them either singly or in combination.

(7) We will be conducting research which relates personality traits to measures of job satisfaction and family cohesion across three age groups. Specifically, we will investigate the relationship of the variables to smoking habits as well as to age. Preliminary analysis shows that the anxiety prone and those who have more contacts with kin do smoke more. We hope that a more detailed analysis will clarify these findings. Presentation of the data is scheduled at a Symposium on Personality, Aging and Social Systems at the American Psychological Association annual meeting, Toronto, August 1, 1973.

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(8) Developments in data management will include creation of two master files: one for data collected during the first 5 year cycle, and a second which will include the second cycle. This will speed longitudinal analysis by increasing efficiency in retrieval of data from the computerized files.

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